



Owner's Manual



MOBILE RADIO 19 DX IV

Printed in China
Part No. 460-170-P
Version A

The Cobra line of quality products includes:

- CB Radios
- microTALK® Radios
- Radar/Laser Detectors
- Safety Alert® Traffic Warning Systems
- Handheld GPS Receivers
- Mobile GPS Navigation Systems
- HighGear® Accessories
- CobraMarine™ VHF Radios
- Power Inverters
- Accessories

For more information or to order any of our products, please visit our website:
www.cobra.com

Nothing comes close to a Cobra®

English

Nothing comes close to a Cobra®

English

Our Thanks, The CB Story, and Customer Assistance

Introduction

Thank you for purchasing the Cobra 19 DX IV CB Radio Transceiver. Properly used, this Cobra product will give you many years of reliable service.

The Citizens Band Story

The Citizens Band lies between the shortwave broadcast and 10-meter amateur radio bands, and was established by law in 1949. The Class D two-way communications service was opened in 1959. (CB also includes a Class A citizens band and Class C remote control frequencies.)

Customer Assistance

Customer Assistance

Should you encounter any problems with this product, or not understand its many features, please refer to this owner's manual. If you require further assistance after reading this manual, Cobra Electronics offers the following customer assistance services:

For Assistance in the U.S.A.

Automated Help Desk English only.
24 hours a day, 7 days a week 773-889-3087 (phone).

Customer Assistance Operators English and Spanish.
8:00 a.m. to 6:00 p.m. CT Mon. through Fri. (except holidays) 773-889-3087 (phone).

Questions English and Spanish.
Faxes can be received at 773-622-2269 (fax).

Technical Assistance English only.
www.cobra.com (on-line: Frequently Asked Questions).
English and Spanish. productinfo@cobra.com (e-mail).

For Assistance Outside the U.S.A.

Contact Your Local Dealer

©2005 Cobra® Electronics Corporation
6500 West Cortland Street
Chicago, Illinois 60707 USA
www.cobra.com

A1 English



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Warnings



REPLACEMENT WARNING

Replacement or substitution of certain parts with replacements other than those recommended by Cobra may be a violation of the technical regulations of Part 95 of the FCC rules, or of Type Acceptance requirements of Part 2 of those rules. When making adjustments, be sure to re-read applicable portions of this instruction manual to make certain you are following correct procedure and that the radio was properly installed.



A FEW RULES THAT SHOULD BE OBEYED

1. You are not allowed to carry on a conversation with another station for more than five minutes at a time without taking a one-minute break to give others a chance to use the channel.
2. You are not allowed to blast others off the air by overpowering them with illegally amplified transmitter power or illegally high antennas.
3. You are not allowed to use CB to promote illegal activities.
4. You are not allowed to use profanity.
5. You may not play music in your CB.
6. You may not use your CB to sell merchandise or professional service.



CHANNEL 9 EMERGENCY MESSAGES

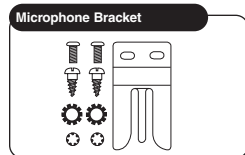
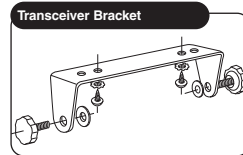
Use Channel 9 for emergency messages only. The FCC gives the following examples of permitted and prohibited types of communications for use on Channel 9. These are guidelines and are not intended to be all-inclusive.

Permitted: "A tornado sighted six miles of town."

Not Permitted: "This is observation post number 10. No tornado sighted."

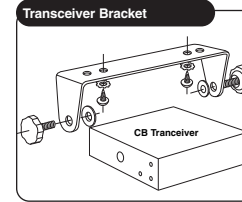
Included in this Package

You should find all of the following items in this package:



Mounting and Connections

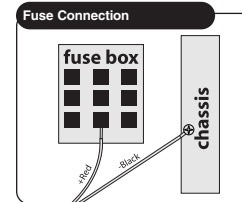
Select a location for the transceiver and microphone bracket that is convenient for operation. In automobiles, the transceiver is usually mounted to the underneath of the dash panel, with the microphone bracket beside it.



A universal mounting bracket is supplied along with self tapping screws and star washers. The transceiver is held in the universal mounting bracket by two thumb screws, permitting adjustment at the most convenient angle.

To mount and connect your transceiver:

1. Hold the radio with mounting bracket in the exact location desired. Remove the mounting bracket and use it as a template to mark the location for the mounting screws.
2. Drill necessary holes and secure mounting bracket in location.
3. Connect the antenna cable plug to the receptacle marked "ANT" on the back of the unit.
4. Connect the red lead of the DC power cord to an accessory 12 volt fuse.
5. Connect the black lead to the negative side of the automobile. This is usually the chassis. Any convenient location with good electrical contact (remove paint) may be used.



NOTE

Before installing the CB radio, visually check the vehicle battery connections to determine which battery terminal, positive or negative (positive is the larger of the two) is grounded to the engine block (or chassis).



6. Mount the microphone bracket on right side of the transceiver or near it using two screws supplied. When mounting in an automobile, place the bracket under the dash so the microphone is readily accessible.
7. Attach the four pin microphone cable to receptacle on front of unit and install unit in bracket securely.

Operation

Antenna Connector



Antenna Connector

This female **Connector** on the rear panel permits connection of the transmission line cable male connector to the transceiver.

External Speaker Jack



External Speaker

The external speaker jack on the rear panel is used for an **External Speaker**. The external speaker should have 8-ohm impedance and be rated to handle at least 4.0 watts. When the external speaker is plugged in, the internal speaker is automatically disconnected.



NOTE

Cobra external speakers are rated 15 watts.

PA Speaker Jack



Public Address (PA)

An external **PA** speaker may be connected to the **PA** speaker jack when used as a public address system. The speaker should be directed away from the microphone to prevent acoustic feed-back. Physical separation or isolation of the microphone and speaker must be employed when operating the **PA** at high output levels.

Power Cable



Power

These wires supply **Power** to the CB radio. This cable is permanently attached to the radio. If you wish to remove the radio after installation, disconnect at fuse holder and ground connector.

Operation

On-Off/Volume Knob



Turning on Your Mobile Radio

Turn the **On-Off/Volume** knob clockwise to turn the power **on** and set the desired listening volume.

CB Antenna

Only a properly matched **Antenna** system will allow maximum power output. In mobile installations (cars, trucks, boats, etc.), an **Antenna** system that is non-directional should be used. When installed in a boat, the transceiver will not operate at maximum efficiency without a ground plate unless the vessel has a steel hull. Before installing the transceiver in a boat, consult your dealer for information regarding an adequate grounding system.



NOTE

Cobra loaded-type antenna models HGA 1000, HGA 1500 and HGA 2000 are highly recommended for most installations. Consult your Cobra dealer for further details (or see order form on page 17).

Three-way combination antennas are available which allow operation of all three bands (AM-FM and CB), using a single antenna. However, use of this type of antenna usually results in less than normal transmit and receive range when compared to a standard-type "Single Band" antenna designed for CB only.

Microphone Connector



Microphone Connector

Allows for convenient removal of the **Microphone** plug when storage is required. The **Microphone** **MUST** be connected to the unit at all times, when in use, for proper operation.



Operation

Squelch

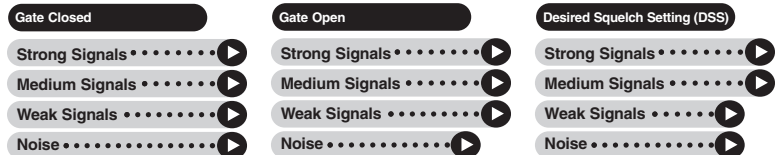
This control is used to cut off or eliminate receiver background noise in the absence of an incoming signal. Adjust until the receiver noise disappears. This will require the incoming signal to be slightly stronger than average receiver noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting.

Squelch is the “control gate” for incoming signals.



To squelch your radio:

1. Full clockwise rotation closes the gate, allowing only very strong signals to enter.
2. Full counterclockwise rotation opens the “gate,” allowing all signals in.
3. To achieve the Desired Squelch Setting (DSS), turn the **Squelch** control counterclockwise until you hear noise. Now turn the control clockwise just until the noise stops. This is the DSS setting.



RF Gain

This control is used to adjust receiver sensitivity. Maximum sensitivity allows weak signals to be received. However, very strong signals (such as from a nearby transmitter) can cause distortion at that setting. Adjust until the distortion disappears. Reducing the receiver's **RF Gain** eliminates distortion from very strong incoming signals.



To set RF Gain:

1. Full counterclockwise rotation minimizes gain for maximum distortion control.
2. To achieve the desired level of distortion control, turn the **RF Gain** knob counterclockwise until the distortion is eliminated.
3. After moving away from the strong signal, turn the **RF Gain** knob fully clockwise to receive all possible signals.



Operation



Selecting a Channel

Rotate the **Channel** knob clockwise until desired channel is displayed.



Channel 9/NOR/Channel 19

Set **CH 9** to obtain instant access to the emergency channel.

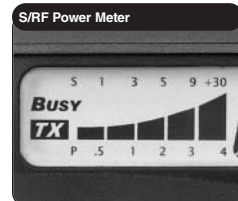
Set **NOR** position to use the channel knob to choose any of the 40 channels.

Set **CH 19** to obtain instant access to the information and calling channel.



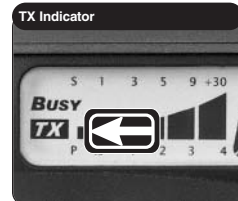
CB/PA

In the **CB** position, the **PA** function is disabled and the unit will transmit and receive on the selected channel. The **PA** function should not be used unless a **PA** speaker is connected. In the **PA** position, the transmit function is disabled and the microphone output will go only to the **PA** speaker.



S/R Power Meter

Shows relative transmitter **RF** output power and input signal strength when receiving. The Liquid Crystal Display (LCD) segments increase with signal strength.



TX Indicator

The **TX Indicator** will light when in the transmit mode. “Busy” will appear when there is an incoming signal.



Operation

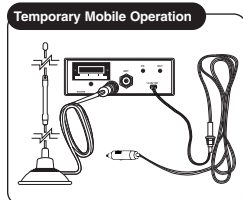
Ignition Noise Interference

Use of a mobile receiver at low signal levels is normally limited by the presence of electrical noise. Under most operating conditions, when signal level is adequate, the background noise does not present a serious problem. Also, when extremely low level signals are being received, the transceiver may be operated with vehicle engine turned off. The unit requires very little current and therefore will not significantly discharge the vehicle battery.

Even though this radio has an automatic noise limiter, in some installations ignition interference may be high enough to make good communications impossible. Consult your authorized Cobra dealer or a two-way radio technician for help in locating and correcting the source of severe noise.

Temporary Mobile Operation

For **Temporary Mobile Operation**, you may want to purchase an additional cigarette lighter adapter from your Cobra dealer. This adapter and a magnetic mount antenna allow you to quickly “install” your transceiver for temporary use.



NOTE

Red Wire is connected to positive side of socket center tip. **Black Wire** is connected to negative side contacts.

Radio resets to CH 9 when connected to cigarette lighter plug.

When using the unit with cigarette adapter, turn **off** when not in use to avoid draining the battery.



Operation



Operating Procedure to Receive

Be sure that power cord, antenna and microphone are connected to the proper connectors before proceeding further. The **CB/PA** switch should be in the CB position.

To receive:

1. Turn the radio **on** by rotating the **On-Off/Volume** knob clockwise.
2. Rotate the **Squelch/RF Gain** knob counterclockwise until incoming signal is heard.
3. Select the desired channel.
4. Set the **On-Off/Volume** knob and the **Squelch/RF Gain** knob to a comfortable listening level.

Operating Procedure to Transmit

Be sure the antenna is properly connected to the radio before transmitting. Prolonged transmitting without an antenna, or with a poorly matched antenna, could cause damage to the transmitter.



To transmit:

1. Select the desired channel.
2. The receiver and transmitter are controlled by the **Press-to-Talk** switch on the microphone. Press the switch and the transmitter is activated; release switch to receive. When transmitting (on a clear channel), hold the microphone two inches from the mouth and speak clearly in a normal voice.

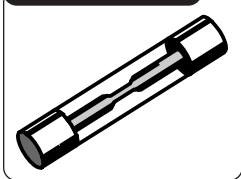
Maintenance/Adjustment

Your Cobra CB transceiver is specifically designed for the environment encountered in mobile installations. The use of all solid state circuitry and its light weight result in high reliability. Should a failure occur, however, review the following, then if necessary, replace parts only with identical parts. Do not substitute.

Check Power Source



Check Fuses in DC Power Cord



Check Microphone Connection



Check Antenna Connection



1. Check connections to the source of power and make sure it is the 13.8 VDC required to operate your radio.
2. Check the fuses in the DC power cord. The main power lead (red) has a two amp 3AG type fuse in its holder. Use only the above specified type and size fuse for maximum protection. Failure to do so will void the warranty.
3. Make certain the microphone is properly plugged in.
4. Make certain the antenna is properly assembled and connected.

If you are unable to correct the problem, refer to product service on page 14 for the correct procedure for warranty and post-warranty service from Cobra.

Frequency Ranges

The Cobra 19 DX IV transceiver represents one of the most advanced AM two-way radios for use as a Class D station in the Citizens Radio Service. This unit features advanced Phase Lock Loop (PLL) circuitry providing complete coverage of all 40 CB channels.

CB Channel	Channel Frequency in MHz
1	26.965
2	26.975
3	26.985
4	27.005
5	27.015
6	27.025
7	27.035
8	27.055
9	27.065
10	27.075
11	27.085
12	27.105
13	27.115
14	27.125
15	27.135
16	27.155
17	27.165
18	27.175
19	27.185
20	27.205

CB Channel	Channel Frequency in MHz
21	27.215
22	27.225
23	27.255
24	27.235
25	27.245
26	27.265
27	27.275
28	27.285
29	27.295
30	27.305
31	27.315
32	27.325
33	27.335
34	27.345
35	27.355
36	27.365
37	27.375
38	27.385
39	27.395
40	27.405



Specifications

General	
Channels	CB – 40 CH
Frequency Range	CB – 26.965 to 27.405 MHZ
Frequency Tolerance	0.005 %
Frequency Control	PLL (Phase Lock Loop) Synthesizer
Operating Temperature Range	-30° C TO + 65° C
Microphone	Plug-in dynamic
Input Voltage	13.8VDC nom. (negative ground)
Current Drain	Transmit: AM full mod., 1.4A (maximum) Receive: Squelched, 0.9 A; full audio output, 1.2A (nominal)
Size	6½" D x 6¾" W x 1½" H
Weight	3.25 lbs.
Antenna Connector	UHF; SO-239
Meter	LCD's; indicates relative power output and received signal strength
Transmitter	
Power Output	4 watts
Modulation	AM (Amplitude Modulation)
Frequency Response	300 to 3000 Hz
Output Impedance	50 ohms, unbalanced
Receiver	
Sensitivity	Less than 1 µV for 10dB (S+N)
Selectivity	6 dB @ 7 KHz, 60 dB @ 10KHz
Image Rejection	60 dB, typical
Adjacent-Channel Rejection	50 dB, typical
Automatic Noise Limiter	Built-in



Limited One-Year Warranty

For Products Purchased in the U.S.A.

Cobra Electronics Corporation warrants that its Cobra CB radios, and the component parts thereof, will be free of defects in workmanship and materials for a period of one year from the date of first consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A.

Cobra will, without charge, repair or replace, at its option, defective CB radios, products or component parts upon delivery to the Cobra Factory Service department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.

You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at Cobra's expense, if the product is repaired or replaced under warranty.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

Exclusions: This limited warranty does not apply: 1) To any product damaged by accident; 2) In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs; 3) If the serial number has been altered, defaced or removed; 4) If the owner of the product resides outside the U.S.A.

All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty. Cobra shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

For Products Purchased Outside the U.S.A.

Please contact your local dealer for warranty information.

Trademark Acknowledgement

Cobra®, Nothing comes close to a Cobra® and the snake design are registered trademarks of Cobra Electronics Corporation, USA. Cobra Electronics Corporation™ is a trademark of Cobra Electronics Corporation, USA.



Product Service

If you have any questions about operation or installing your new Cobra product, or if you are missing parts...

Please call Cobra first! DO NOT RETURN THIS PRODUCT TO THE STORE!
See customer assistance on page A1.

For Products Purchased in the U.S.A.

If your product should require factory service, please call Cobra first before sending your radio. This will ensure the fastest turn-around time on your repair. You may be asked to send your radio to the Cobra factory. It will be necessary to furnish the following to have the product serviced and returned.

1. For warranty repair include some form of proof-of-purchase, such as a mechanical reproduction or carbon of a sales receipt. If you send the original receipt, it cannot be returned.
2. Send the entire product.
3. Enclose a description of what is happening with the radio. Include a typed or clearly printed name and address of where the radio is to be returned.
4. Pack radio securely to prevent damage in transit. If possible, use the original packing material.
5. Ship prepaid and insured by way of a traceable carrier such as United Parcel Service (UPS) or Priority Mail to avoid loss in transit to Cobra Factory Service, Cobra Electronics Corporation, 6500 West Cortland Street, Chicago, Illinois 60707 U.S.A.
6. If the radio is in warranty, upon receipt of your radio it will either be repaired or exchanged depending on the model.

Please allow approximately three to four weeks before contacting Cobra for status. If the radio is out of warranty, a letter will automatically be sent informing you of the repair charge or replacement charge. If you have any questions, please call 773-889-3087 for assistance.



For Products Purchased in Canada

For out of warranty service, ship prepaid this product to: AVS Technologies Inc., 2100 Trans Canada Hwy S., Montreal, Quebec, H9P 2N4. We reserve the right to repair or replace the radio with an equivalent product. Please include the following information: Date of Purchase, Model Number, Dealer Purchased From, Dealer Address, Dealer Phone Number.

For Products Used in Canada

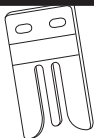
Industry Canada Notice

Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of this device.

For Products Purchased Outside the U.S.A. or Canada

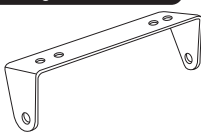
Please contact your local dealer for product service information.

Accessories

Replacement
Microphone Bracket

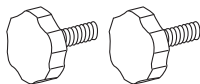
741-080-9-001

\$0.45

Replacement
Mounting Bracket

251-353-9-001

\$4.50

Replacement
Thumb Screws

634-081-9-001

\$0.60

Four Pin Premium
Noise-Cancelling Microphone

HG M84

\$74.95

Four Pin Premium Noise-
Cancelling MicrophoneHG M84W
Wood Grain

\$74.95

Four Pin Replacement
Dynamic Microphone

HG M73

\$19.95

Four Pin Noise Canceling
Microphone

HG M77

\$30.95

Four Pin Power
Microphone

HG M75

\$25.95

21" Base Loaded Magnet
Mount Antenna

HG A1000

\$28.95

38" Base Loaded Magnet
Mount Antenna

HG A1500

\$46.95

54" Base Loaded Magnet
Mount Antenna

HG A2000

\$99.95

Dynamic
External Speaker

HG S100

\$21.95

Noise Canceling
External Speaker

HG S300

\$28.95

Noise Canceling With
Talk Back External Speaker

HG S500

\$32.95